

CAD/CAM Engineering Technology Diploma Program



Candidate Guide

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The CAD/CAM Engineering Technology Diploma program is dedicated to removing barriers and broadening the access to programs at SIAST. We believe that adults acquire knowledge and skills through life and work experience that may align with courses within our programs.

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|--------------------------------|--------------|-------------|--|--|
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Why consider a PLAR assessment?

PLAR refers to the combination of flexible ways of evaluating people's lifelong learning, both formal and informal against a set of established standards. You can receive academic credit for your relevant lifelong learning. The CAD/CAM Engineering Diploma program recognizes prior learning in a number of ways.

We recognize:

- Previous formal learning from an accredited training institution through transfer of credit.
- Previous informal learning or experiential learning through a comprehensive prior learning and recognition process.

What are the PLAR options?

To be eligible for PLAR, an applicant must first register or already be registered as a SIAST student.

Option A: Individual course challenge

If you have recent successful experience in the drafting field, and have learned the skills and knowledge for **one or more** of the CAD/CAM Engineering Technology courses, you may apply to be assessed for each applicable course.

Fees:

- There will be a charge for each individual course assessment.
- For a listing of the specific PLAR fees, check the [PLAR database](#) or call SIAST and ask to speak to the PLAR advisor/counsellor assigned to the CAD/CAM Engineering Technology program at: 1-866-467-4278 or 1-866-goSIAST.

How many courses can be challenged through PLAR in the CAD/CAM Engineering Technology program?

Currently we have 1 out of 41 diploma courses with PLAR challenges available. There is no limit. You may challenge as many of these courses as you are able to prove prior skills and knowledge through assessment.

Which courses are PLAR-ready?

| CAD/CAM Engineering Technology Diploma Program Profile | | | |
|--|----------------|---|---------------------------------|
| COURSE CODE | COURSE NAME | PLAR Challenge(s) available through program | PLAR Challenge(s) not available |
| DRFT 390 | CAD Drafting 1 | √ | |

Note: Some courses common to multiple programs at SIAST (i.e. computers, communications, math, and sciences) are managed by associated studies faculty. To see if these shared courses in your program are PLAR-ready, visit the “Courses Common to Multiple Programs” link on the [PLAR homepage](#) for further details.

For assistance call SIAST and ask to speak to the PLAR advisor/[counsellor](#) assigned to the CAD/CAM program at: 1-866-467-4278 or 1-866-goSIAST.

Is PLAR available at any time of the year?

PLAR challenges are currently being offered as requested.

Is it *easier* to challenge a course through PLAR - OR - take the course?

Neither is easier. By using PLAR you may reduce the repetition of studying information that you already know. The PLAR process allows you to demonstrate knowledge you already have.

PLAR is not an easy way to certification, rather a “different” way to obtain certification. Your personal level of skill and experience will dictate which courses you choose to challenge. The self-audit section found later in this guide will help you decide if you have a good match of skill and knowledge for a specific course.

Methods of assessing prior learning

Assessment methods measure an individual's learning against course learning outcomes. The assessment methods listed below are the ones most commonly used, but other forms of flexible assessment may be considered. These assessments may include one or a combination of the following assessment tools:

- product validation & assessment
- challenge exam
- standardized tests
- performance evaluations (including skill demonstrations, role plays, clinical applications, case studies)
- interviews and oral exams
- equivalency (evaluations of learning from non-credit training providers)

- evidence or personal documentation files (providing evidence of learning from life and work experiences and accomplishments)

If I live out of town, do I have to travel to a main campus to do PLAR?

There will be times that you will need to meet with the program on campus. However, we will try to keep travel to a minimum.

What if I have a disability & need equity accommodations?

At SIAST, we understand that sometimes services must be provided to students in a variety of ways to achieve the goals of fair representation. Therefore, the range of services provided for Education Equity students is as diverse as the needs of those students. We strive for equity (not uniformity) and provide varied services for students with differing needs. If more information is required, please contact a SIAST counsellor at a campus closest to you or refer to the SIAST Web site: http://www.siastr.sk.ca/stuservices/advising_counselling.shtml

Are there other methods to gain SIAST course credits for prior learning?

Transfer Credit

Yes, SIAST will grant credit for previous training that is similar in content, objectives, and evaluation standards to SIAST training. Transfer of credit is different from the PLAR process. Transfer Credit guidelines may be found at:

http://www.siastr.sk.ca/admissions/transfer_credit.shtml

It is the student's responsibility to check with [Registration Services](#) for specific campus procedures on this policy. For specific information and guidelines regarding transfer of credit, contact a [SIAST educational counsellor](#).

An online provincial transfer credit guide is now available at www.saskcat.ca

Note: *If you are a recent high school graduate, check the Saskatchewan Learning Web site for any articulated agreements that may apply for Computer Courses or Practical and Applied Arts Courses.*

[SaskLearning Credit Transfer Guide](#)

[SaskLearning website](#)

Equivalency Credit

Equivalency credit refers to the application of credit you may have earned in a previously taken SIAST course to your current SIAST course. Apply at registration services for *equivalency credit*. This process should also be completed prior to your PLAR challenge. If these credits cannot be used for *equivalency credit*, you may use these accredited courses as part of your evidence for your PLAR challenge.

Contact us

If more information is required, please contact a designated PLAR counsellor at a campus closest to you.

Kelsey Campus, Saskatoon, SK

1-866-goSIAST or 1-866-467-4278

Palliser Campus, Moose Jaw, SK

1-866-goSIAST or 1-866-467-4278

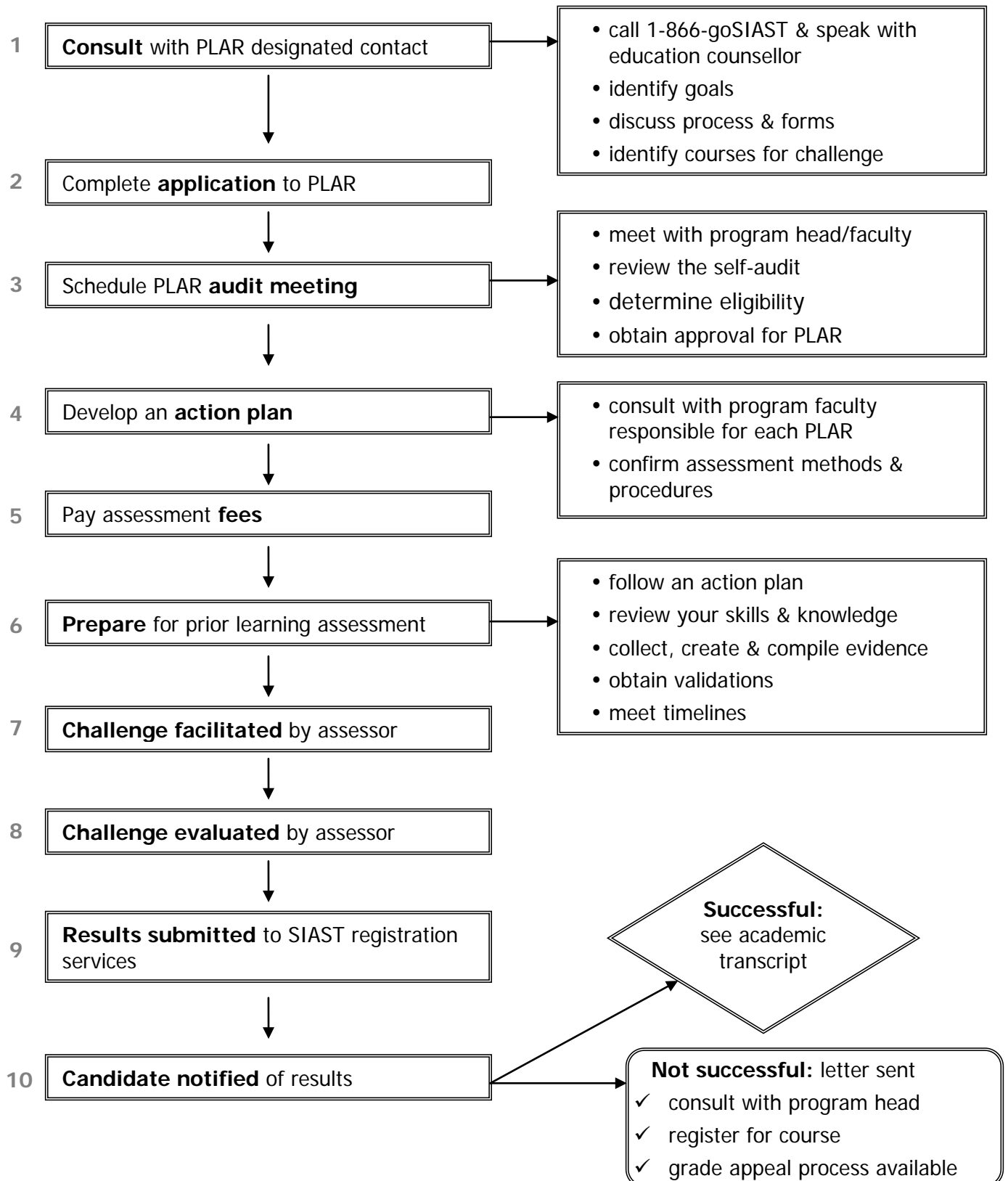
Wascana Campus, Regina, SK

1-866-goSIAST or 1-866-467-4278

Woodland Campus, Prince Albert, SK

1-866-goSIAST or 1-866-467-4278

Prior Learning Assessment and Recognition process



How long will it take to prepare evidence for PLAR?

Since the requirements are different for each course, and each candidate has different experiences, the amount of time it takes to prepare your evidence will vary.

Steps to complete a self-audit

1. Read through the levels of competence as listed below.

| | |
|--------------------|--|
| Mastery: | I am able to demonstrate the learning outcome well enough to teach it to someone else. |
| Competent: | I can work independently to apply the learning outcome. |
| Functional: | I need some assistance in using the outcome. |
| Learning: | I am developing skills and knowledge for this area. |
| None: | I have no experience with the outcome. |

Learning outcomes

For each learning outcome listed, please self-evaluate your competency levels and record in the appropriate column for each self-audit.

2. Take a few minutes and read through the following self-audit for each course you are interested in as a PLAR candidate.
3. Check your level of competence as you read through each of the learning outcomes for each course. The information will help you in your decision to continue with your PLAR application.
4. In order to be successful in a PLAR assessment, your abilities must be at the competent or mastery level for the majority of the learning outcomes. Some things to consider when determining your level of competence are:
 - How do I currently use this outcome?
 - What previous training have I had in this outcome: workshops, courses, on-the-job?
 - What personal development or volunteer experience do I have in this area?

Be prepared to explain the reason you chose this level if asked by an assessor.

5. Bring the completed self-audit to a consultation meeting with the program head or faculty member in [step 3 – PLAR process](#) of the candidate process for prior learning assessment.

Self-audit guide(s)

DRFT 390 – CAD Drafting 1

You will study the basic concepts of computer assisted drafting. You will learn how to use the AutoCAD user interface as it pertains to two dimensional CAD drawings. The course content includes drawing set-up, coordinate systems, drawing tools, editing commands, display options, layers, colors, line types, text, basic dimensioning and plot commands.

Credit unit(s): 2.0

| DRFT 390 – CAD Drafting 1 Mastery: I am able to demonstrate it well enough to teach it to someone else. Competent: I can work independently to apply the outcome. Functional: I need some assistance in using the outcome. Learning: I am developing skills and knowledge for this area. None: I have no experience with the outcome. | Mastery | Competent | Functional | Learning | None |
|--|---------|-----------|------------|----------|------|
| 1. Demonstrate coordinate systems and menu operation. | | | | | |
| ▪ Describe a Cartesian coordinate system | | | | | |
| ▪ Describe absolute, relative, and polar coordinate entry methods | | | | | |
| ▪ Explain the use of the Line command in CAD | | | | | |
| ▪ Explain the use of the Undo command in CAD | | | | | |
| ▪ Explain the use of the Erase command in CAD | | | | | |
| ▪ Use coordinate entry methods to create graphical objects using the Line method | | | | | |
| ▪ Use file utilities to save CAD file | | | | | |
| 2. Construct basic geometric entities. | | | | | |
| ▪ Practice the method of opening an existing file and starting a new file | | | | | |
| ▪ Set up drawing limits | | | | | |
| ▪ Differentiate between drawing, plotter and “real world” units | | | | | |
| ▪ Select drafting settings | | | | | |
| ▪ Demonstrate the use of Zoom and Pan to control display | | | | | |
| ▪ Explain the use of the Circle and Arc commands in CAD | | | | | |
| 3. Implement drawing management. | | | | | |
| ▪ Demonstrate how to create layers | | | | | |
| ▪ Demonstrate how to assign properties to layers | | | | | |

| DRFT 390 – CAD Drafting 1 Mastery: I am able to demonstrate it well enough to teach it to someone else. Competent: I can work independently to apply the outcome. Functional: I need some assistance in using the outcome. Learning: I am developing skills and knowledge for this area. None: I have no experience with the outcome. | Mastery | Competent | Functional | Learning | None |
|--|---------|-----------|------------|----------|------|
| <ul style="list-style-type: none"> ▪ Construct a layer standard for a new drawing | | | | | |
| 4. Perform basic editing and drawing creation techniques. | | | | | |
| <ul style="list-style-type: none"> ▪ Produce geometry with the Xline and Ray commands | | | | | |
| <ul style="list-style-type: none"> ▪ Produce drawing geometry with the Offset command | | | | | |
| <ul style="list-style-type: none"> ▪ Modify drawing geometry with the Trim and Extend commands | | | | | |
| <ul style="list-style-type: none"> ▪ Discuss UCS origin | | | | | |
| <ul style="list-style-type: none"> ▪ Use the Object Snap feature in CAD | | | | | |
| 5. Design drawing documentation. | | | | | |
| <ul style="list-style-type: none"> ▪ Create text styles | | | | | |
| <ul style="list-style-type: none"> ▪ Demonstrate the creation of text | | | | | |
| <ul style="list-style-type: none"> ▪ Demonstrate dimensioning in CAD | | | | | |
| <ul style="list-style-type: none"> ▪ Revise text and dimensioning in CAD | | | | | |
| 6. Construct templates. | | | | | |
| <ul style="list-style-type: none"> ▪ Recognize the use of templates | | | | | |
| <ul style="list-style-type: none"> ▪ Create templates | | | | | |
| <ul style="list-style-type: none"> ▪ Create dimension styles | | | | | |
| <ul style="list-style-type: none"> ▪ Design layouts | | | | | |
| 7. Perform advanced editing and drawing creation techniques. | | | | | |
| <ul style="list-style-type: none"> ▪ Use the Fillet and Chamfer commands | | | | | |
| <ul style="list-style-type: none"> ▪ Use of Polar and Object Snap tracking | | | | | |
| <ul style="list-style-type: none"> ▪ Practice the use of all previous drawing techniques | | | | | |
| 8. Prepare hard copy production (printing and plotting). | | | | | |
| <ul style="list-style-type: none"> ▪ Setup a plotter to receive a plot of a drawing | | | | | |
| <ul style="list-style-type: none"> ▪ Select a drawing scale that will match a standard paper size when plotted at a standard scale | | | | | |

| DRFT 390 – CAD Drafting 1 Mastery: I am able to demonstrate it well enough to teach it to someone else. Competent: I can work independently to apply the outcome. Functional: I need some assistance in using the outcome. Learning: I am developing skills and knowledge for this area. None: I have no experience with the outcome. | Mastery | Competent | Functional | Learning | None |
|--|---------|-----------|------------|----------|------|
| ▪ Define Paper Space | | | | | |
| ▪ Prepare a plot for a standard printer | | | | | |
| ▪ Demonstrate the Mirror command | | | | | |
| ▪ Demonstrate the Stretch command | | | | | |
| ▪ Demonstrate dimensioning in Paper Space | | | | | |
| 9. Generate crosshatching. | | | | | |
| ▪ Create a Hatch boundary | | | | | |
| ▪ Demonstrate the procedure of Hatch creation | | | | | |
| ▪ Demonstrate the use of the Area and Mass Properties commands | | | | | |
| 10. Construct Blocks. | | | | | |
| ▪ Discuss Blocks and their application | | | | | |
| ▪ Create internal blocks | | | | | |
| ▪ Use editing techniques to reposition blocks | | | | | |

PLAR assessment methods

If you qualify for PLAR, you may be asked to demonstrate your learning in one or more of the following ways. Be prepared to discuss the expectations during a consultation meeting.

1. Challenge exam

- 60 % pass mark required
- Practical exam using AUTOCAD software